20% patients from a younger age group i.e. 25 – 35 years. Mean 39 % of patients with newly diagnosed hypertension are uncontrolled with monotherapy. Among the overall patients receiving antihypertensive therapy mean 53 % of patients are prescribed an ARB. About 75% & 61% of doctors prefer Olmesartan as the ARB of choice in young & elderly patients with newly diagnosed hypertension, respectively. 84.79 % of doctors are of the opinion that Olmesartan would provide early control of blood pressure as compared to other ARBs. Combination of ARB+Diuretic is most commonly preferred by doctors for patients with stage 2 hypertension whereas ARB+CCB for diabetic hypertensive patients. In our study, ARBs had least rate of adverse event & discontinuation among all anti-hypertensive groups of drugs.

Conclusion: This study recognizes the pattern of presentation of hypertension in general population and the current trends in utilization of antihypertensive therapy. Majority of hypertensive patients are uncontrolled with monotherapy. Angiotensin receptor blockers are the preferred class of drugs with least adverse event rate and maximum compliance.

Assessment of safety of fixed dose combination of Olmesartan, Amlodipine and Hydrochlorothiazide: A prescription event monitoring study

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Objective: A post marketing Prescription-Event Monitoring study was undertaken to assess the safety of FDC of Olmesartan, Amlodipine and Hydrochlorothiazide, in real world clinical settings in India.

Methods: Physicians were sent PEM forms requesting clinical event data on patients prescribed FDC of Olmesartan (20/40mg), Amlodipine (5mg) and hydrochlorothiazide (12.5mg). Data on patient's demographics, indication for FDC, concomitant medication and other relevant history was collected and analyzed.

Results: Data collected from 4763 patients was analyzed. Mean age of the population was 55 years with 59.25% males. Common indication for the FDC was uncontrolled hypertension (60.74%). Weakness was the most common event reported (0.29%), followed by pedal odema, dizziness persistent hypertension 0.27%, 0.23%, 0.23%, respectively. Less common events reported were Headache (0.08%), gastritis (0.06%), stroke (0.06%), chest pain (0.04%), LRTI (0.04%), myalgia (0.04%). Diarrhea, Labyrinthitis, Itching, UTI, Hyponatremia, hypotension and hypersomnia was seen in 0.02% patients. Events were more common in patients with uncontrolled hypertension (60.74%). In other associated conditions diabetes and dyslipidemia was present in 37.90% and 35.10% respectively, 15.33% showed both together. Concomitant statins, hypoglycemic and antiplatelet agents were prescribed 42.26%, 33.67%, 24.69% respectively.

Conclusions: The FDC of Olmesartan, Amlodipine and Hydrochlorothiazide was found to be safe and well tolerated when prescribed in patients for the management of hypertension.

Prevalence of hypertension in school going children in Delhi

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Aims: The present study was designed to estimate the prevalence of hypertension among primary school children in Delhi.

Methods: The study was conducted at National Heart Institute, New Delhi and 10 primary schools of Delhi. All schools were co-education schools. The ages of children were from 5 to 15 years. A total of 2011 students were examined for blood pressure (BP) and anthropometry. Appropriate size BP cuff was used. Pre-hypertension was defined as Systolic blood pressure (SBP) and/or Diastolic blood pressure (DBP) between 90th and 95th percentile. Hypertension was defined as SBP and/or DBP over 95th percentile. Children having hypertension in first and second recording; repeat measurement was done to confirm hypertension after a week.

Results: The mean age of students was 10.78 ± 2.98 years, mean height was 141.49 ± 16.38 cms, mean SBP was 103.34 ± 9.0 mm Hg and mean DBP was 65.97 ± 6.64 mm Hg. Prevalence of obesity in hypertensives was 8.7% against normotensive 1.1% ($p<0.05$). Prevalence of hypertension in family members of hypertensive was 18.6% and in normotensive 13.1% ($p=0.1$). Prevalence of diabetes mellitus in family members of hypertensive was 23.4% and 13.7% in normotensive ($p<0.05$); while prevalence of ischemic heart disease in family members was 12.34% in hypertensive and 8.3% in normotensive ($p<0.05$).The prevalence in boys was 3.3% (5-9 years 2.3%, 10-12 years 4.6%, and 13-15 years 2.9%) and in girls was 2.9% (5-9 years 2.5%, 10-12 years 2.8%, 13-15 years 3.4%). The overall prevalence of high BP in school going children of 5-15 years age was 3.1% (63/2011).

Conclusions: Prevalence of hypertension in school children was 3.1%. We observed obesity, family history of diabetes mellitus, ischemic heart disease to be significant association for childhood hypertension.

Effect of cilnidipine on blood pressure, heart rate and proteinuria in comparison with amlodipine

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Background: Calcium antagonists are now widely used for the treatment of various types of hypertension. Hypertension is a widespread public health problem and a major risk factor for cardiovascular and cerebrovascular diseases. Despite their ability to lower the high blood pressure effectively, calcium antagonists do not always protect against cardiovascular complications. Amlodipine used as antihypertensive for long period. Cilnidipine has two actions, block L-type Ca channels in vascular smooth muscle, which exerts an antihypertensive effect similar to L-type Ca channel blockers (e.g., amlodipine), and block N-type Ca channels at sympathetic nerve endings, which suppresses increased sympathetic activity in animal models and human.

We compare the clinical effectiveness of Amlodipine and Cilnidipine on blood pressure, heart rate, and proteinuria

Method: The study was prospective, randomized open lable study. Total 50 patients were included in study of that 24 patient were on cilnidipine 10-20 mg and amlodipine 5-10 mg. 12 patients of amlodipine group and 16 patients of cilnidipine group were diabetic. 10 and 12 patients of amlodipine and cilindipine group had proteinuria respectively. Both group were followed for 6 months at

monthly interval for blood pressure and heart rate and proteinuria was assessed at six month.
Results: Both the groups were well matched in term of sex, age, and weight. Both cilnidipine and amlodipine significantly reduced both systolic and diastolic blood pressure. Pulse rate were higher in patient treated with amlodipine than the patient treated with cilnidipine. Cilnidipine decreased proteinuria which was not seen in patient on amlodipine.
Conclusion: Thus, study showed that cilnidipine which is Land N type calcium channel inhibitor is better than amlodipine which L type of calcium channel inhibitor in patient having cardiovascular disease, diabetes and renal disease and is better alternative to amlodipine.

	Baseline		After treatement	
	Amlodepine(n-24)	Cilnidipine(n-26)	Amlodepine(n-24)	Cilnidipine(n-26)
Age yrs	58+-4	62+-5		
BMI	26+-4	24+-2.6		
Number with DM	12	14		
Number with proteinuria	10	12		
Day time SBP	164+-12	166+-14	152+-10	154+-11
Day time DSP	96+-8	100+-10	88+-8.4	91+-6.2
Day time PR	74+-9.8	72+-7.2	78+-7	64+-4
Night time SBP	140+-18	144+-16	132 +-12	136+-10
Night time DBP	92+-6.4	94+-8.4	88+-6	90+-8
Night time PR	60+-7	64+-8.4	66+-14	60+-8

Effect of permanent pacing VVI mode in patients with complete heart block on central aortic pressure and stiffness

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Background: Complete Heart Block (CHB) is a condition in which the impulse generated in the SA node does not propagate to the ventricles. Causes include coronary ischemia, idiopathic degeneration of AV node and others. Symptomatic patients were advised Permanent pacemaker insertion. Most have high blood pressure as per Marey's law (1961).
Aim: To assess the effect of permanent pacing VVI mode in CHB patients on central systolic pressure, pulse pressure and arterial stiffness and to assess the effect of vasodilator therapy in reducing arterial stiffness in CHB patients on Permanent pacing VVI mode.

Characteristics	Pre	Post PPI	P Value
Brachial SBP	157 ± 18.6	122.8 ± 16.96	<0.0001
Central SBP	143 ± 14.37	111 ± 14.53	<0.0001
Central PP	63.9 ± 16	38.11 ± 11	<0.0001
AP	21.56 ± 7.22	10.22 ±5.73	<0.0001
Al	41.4 ± 9.16	24.05 ± 9.9	<0.0001
Pre PPI	Pre Brachial VS Central SBP		<0.05
Post PPI	Post Brachial VS Central SBP		<0.04

Methods: This study is a prospective analytical study done in Department of Cardiology at single-centre tertiary care hospital setting from January 2014 to July 2014. 18 consecutive patients with CHB before and after permanent pacemaker (VVI mode) insertion were included. Baseline characteristics like Brachial Systolic Blood Pressure (SBP), Central SBP, Central pulse pressure (PP), Augmentation pressure (AP), Augmentation Index(AI) and Heart Rate were measured before and 10 days after pacemaker insertion. Brachial SBP was measured with Sphygmomanometer and Central Pressure and stiffness measured using Sphygmocor device (Excel) which derives central parameters by FDA approved transfer function. Data were presented as mean ± 1SD and the characteristics were compared using t test. A p value of less than 0.05 was considered statistically significant. Diabetic patients were excluded from study.
Results: Out of 18 Patients, mean age was 59yrs (lowest 27yrs and highest 80yrs), 11 were males and 7 were females.
Conclusion: Insertion of Permanent Pacemaker Insertion VVI mode shows significance reduction in Central systolic pressure and arterial stiffness. Based on Central Blood Pressure and Arterial stiffness assessment some patient needed vasodilators to reduce arterial stiffness after Permanent pacing.

Use of angiotensin receptor blockers for the treatment of hypertension in India

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Background: ARBs have been included as a first-line therapy in JNC 8. Additionally, the 2014 ASH/ISH guidelines recommend that ARBs should be preferred over ACE-I if they are available and affordable as they do not cause cough and only rarely cause angioedema, and have effects and benefits similar to ACE-I. Currently there is a dearth of data regarding the use of ARBs as monotherapy or combination therapy for the treatment of hypertension in India.
Methods: A prescription research survey was conducted amongst physicians in India to obtain insights about the use of ARBs and their combinations in clinical practice. The study was conducted through a survey questionnaire consisting questions on use of ARBs as an antihypertensive, including preferences of molecules amongst the ARBs and the combinations of ARBs used for the management of hypertension with/without comorbid conditions.
Results: The survey questionnaire was answered by 409 physicians. ARBs are preferred as the first-line antihypertensive in